

Patent [19]

[11] Patent Number: 11128630

[45] Date of Patent: May. 18, 1999

[54] SOLAR IRRADIATION SYSTEM AIR CLEANING ELEMENT AND CLEANING OF AIR

[21] Appl. No.: 09309388 JP09309388 JP

[22] Filed: Oct. 23, 1997

[51] Int. Cl.⁶ B01D03914 ; A61L00901; A61L00920; C08K00322; C08L02718; B01J03502

[57] ABSTRACT

PROBLEM TO BE SOLVED: To deodorize the inside of an automobile, etc., with a photocatalytic body and sunbeams by dispersing fine photocatalyst particles in a fired layer of a polytetrafluoroethylene resin, forming fine voids between the resin and the photocatalytic particles and disposing the resultant photocatalytic layer having a specified void volume on a substrate.

SOLUTION: A photocatalytic layer 2 having &e7% void volume is disposed on a substrate 1 to obtain the objective air cleaning element A useful in the deodorization of the inside of an automobile. The photocatalytic layer 2 is obtd. by dispersing fine photocatalyst particles in a fired layer of sintered polytetrafluoroethylene powder, forming fine voids between the resin and the photocatalyst particles and allowing the gaps in the sintered polytetrafluoroethylene powder to communicate with an air layer to impart a multi-gap communicating structure. The voids between the polytetrafluoroethylene resin and the photocatalyst particles are formed as fine gaps of several nm to several &u;m thickness so that air is allowed to flow in and out sufficiently. A deodorizing sheet based on activated carbon, a zeolite or the like is laminated if necessary.
